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Oracle

The dramaturgy of a virtual reality theatre performance

By Kenneth Hansen

Introduction:

New media platforms such as VR-panoramas, CAVEs and VR-cinemas present new opportunities and challenges for the theatre. The first step to meet this challenge was taken at VR Media Lab at Aalborg University the summer 2000. The VR theatre performance "Oracle" here combined two performers, a CAVE system and a 3D-panorama with traditional media such as video and the Internet.

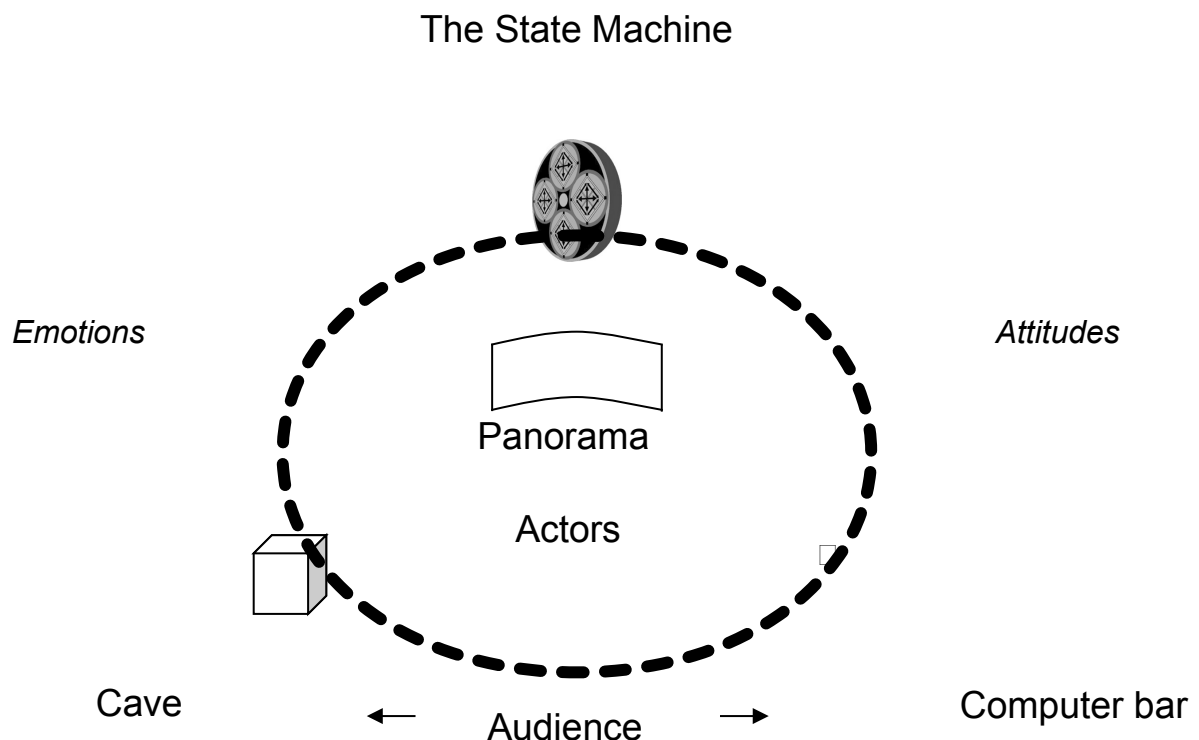
The scenography of the theatre performance was generated by a supercomputer and shown both in the CAVE and the 3D-panorama. It showed four scenes with moving objects and slow fly-throughs. The drama was interactive but only indirectly. A small computer program named "The State Machine" continuously compared the attitudes of the audiences – harvested in advance through a questionnaire on the net - with the emotional settings of the characters – set in the CAVE - and decided what scene to play next, what the ambience was to be in the scene and what the end scene would be. These consequences were then communicated to the actors by the changes in VR setting or by calling them on mobile phones on key points in the story.

The purpose of the VR theatre performance was to experiment with the design and control of a new kind of media platform. We concluded that this platform is well suited for the development of traditional theatre and that this new dramaturgical space could be approached not just as something "interactive" but more importantly, as a perceived oscillation between "real" and "virtual", between the experienced and the represented or, one could say, between feelings and attitudes.

To design and control such an oscillation is a dramaturgical challenge for creators of VR theatre performances in the future. This paper briefly outlines the project and explains key ideas, especially those relating to the dramaturgy.

The concept

The concept consists of a connection of four major technical parts: The cave, the panorama, the computer bar and The State Machine. The audience fills out a questionnaire on various attitudes at the computer bar while watching video presentations of the characters in the show. Four members of the audience are then selected to enter the cave. In here they will investigate the mutual inner space of the characters, representing their emotions. The rest is guided to the 3D panorama cinema. The State Machine now directs the show according to a ongoing comparison of the data from the computer bar, the attitudes, and from the cave, the emotions. The concept can be outlined like this:



The story

A man and a woman, Johannes and Lene, sit in front of a TV surrounded by computers and cellular phones an arbitrary evening shortly before the evening news. The story depicts a moral dilemma: pregnant with another man the woman has hesitated in coming to terms with what to do. Due to her strong religious upbringing she has not been able carry out the secret abortion she had planed. On the other hand she does not want to leave and she does not want to live with the other man. What will happen to the relationship, and what will happen to the unborn child? Will it die or will it live?

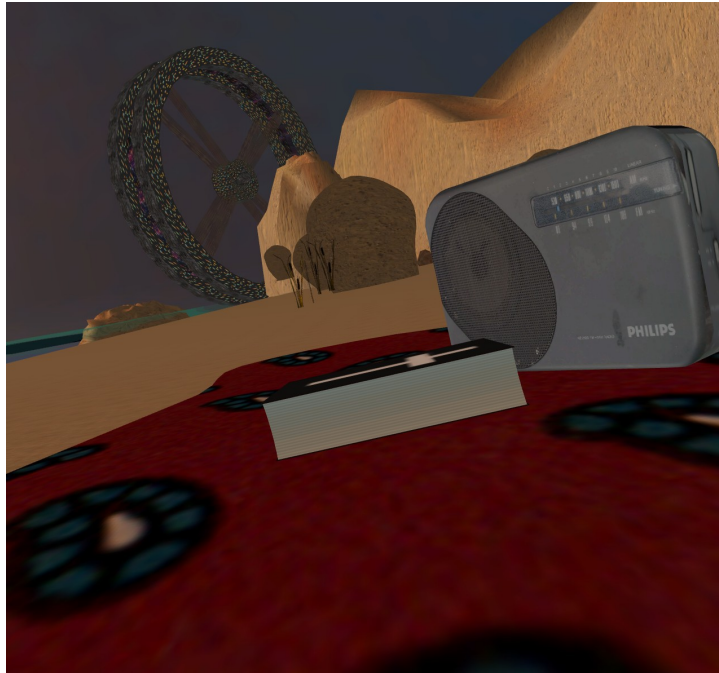
The characters are presented on video screen in the entrance hall. Here we learn about Lene's religious background on the west coast of Denmark, her father the priest of a Christian fundamentalist religious community, and about Johannes childhood in a small touristy village on the east coast, - his mother

the keeper of a small tourist store with ice cream and magazines, and his father the coach at the local high school. Lene is trying to combine career and the enjoyment of life despite her upbringing. Johannes is trying to find the inner talent that will bring success to his small website bureau.

Through four scenes, “the cave”, “the beach”, “the ocean”, “the aquarium” – each name designating a virtual scenography with surrealistic content and style – the relationship and the central question are discussed and negotiated in various ways.



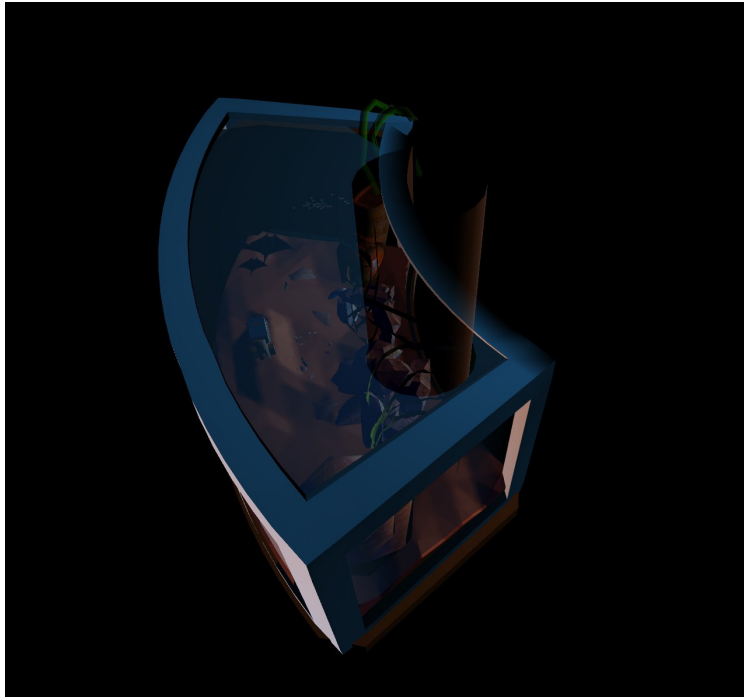
The Cave: Two gigantic intertwined figures rotate slowly as the camera fly through. Symbolic objects fly by: a monstrous fetus, the bible and an erotic magazine.



The beach. Lene and Johannes try to reach each other. They talk about their vacation together the first summer they met. The camera flies through the big wheel heavily rolling up and down the beachfront separating the blanket from the water, and zooms in on the bible and the radio. On the beach we see buried heads scattered around.



The Ocean. In between everything we fly with mobile phones out of a volcano and head out in the archipelago. We fly with the fish, avoid bible pages and look down on strange furniture on isolated islands.



The Aquarium. Is this final claustrophobic form we end the journey. We enter through the air pump and zoom in on a store and a church on the bottom. The relation between the two buildings varies with the endings. In the water we see flocks of nails, jellyfish and stingrays.

The story leads to one of four endings:

1. The couple communicate and reach a rational decision: they stay together and share the responsibility of the child.
2. The man can't accept the circumstances and leaves the relationship, and she brings up the child alone.
3. The man accepts the child but in a way she can't accept. She leaves the relationship and brings up the child alone.
4. Both the man and the woman are unable to accept the circumstances. They are trapped in a tragic paradox. The woman gets an abortion.

The control structure

To control the structure of the performance a small computer program, named "the state machine", running on the main computer functions as a kind of operating system for the performance. Represented in pseudo code it is really a formalized collection of rules:

The State Machine:

Program

Var

emotion: confusion, trust, love, anxiety;
attitude: morality, ethics, sociality, individuation;
room: cave, beach, ocean, aquarium,

Procedure GetEmotions;

Get emotions from cave users;

Procedure GetAttitudes;

Get attitudes from audience;

Procedure RegulateEmotions;

If morality + sociality > ethics + individuation
Then confusion = confusion + 0,25, anxiety = anxiety + 0,25

Else love = love + 1, trust + 1;

If morality + individuation > sociality + ethics

Then anxiety = anxiety + 0,25

Else love = love + 0,25;

If ethics + individuation > morality + sociality

Then trust = trust + 0,25

Else confusion = confusion + 0,25;

Procedure RegulateAttitudes;

If love + trust > confusion + anxiety

Then morality = morality - 1, sociality = sociality - 1

Else individuation = individuation - 1, ethics = ethics - 1;

Procedure SelectOceanOrBeach;

If trust + love > confusion + anxiety

Then room = beach

Else room = ocean;

Procedure SelectBeachOceanOrAquarium;

If the cave user has only visited the ocean

Then room = beach

Else

If the cave user has only visited the beach

Then room = ocean

Else room = aquarium;

Procedure SelectAmbience;

If love > (trust + anxiety + confusion)/3

Then room = love

Else

If trust > (love + anxiety + confusion)/3

Then room = trust

```
Else
If confusion > (love + anxiety + trust)/3
Then room = confusion
Else
Room = anxiety;
```

Procedure SelectEnd;

```
If love > (trust + anxiety + confusion)/3
Then room = love
Else
If trust > (love + anxiety + confusion)/3
Then room = trust
Else
If confusion > (love + anxiety + trust)/3
Then room = confusion
Else
Room = anxiety;
```

Procedure RunShow;

```
GetEmotions;
GetAttitudes;
SelectAmbience;
RegulateEmotions;
SelectAmbience;
SelectBeachOrOcean;
RegulateEmotions;
RegulateAttitudes;
RegulateEmotions;
SelectAmbience;
SelectEnd;
```

Begin

```
RunShow;
```

End.

This "machine" works on two sets of variables: "Inner" and "outer":

The outer variables are understood as the attitudes of the audience. These are "harvested" through a questionnaire on Internet. This is also accessible from a "computer bar" in the entrance hall of the performance. Through the questionnaire the value of 4 variables are set. The first is "morality", understood as the tendency of the characters to follow given moral imperatives. For example this variable crucially affects the inclination of the woman to detach herself from her strong religious upbringing. The second is "ethics", understood as the characters' attachment to general ethical values, for example human rights. The third is "Sociality" understood as the weight that the characters place on being a part of a social group, for example a family or a religious group. The last is "individuation" understood as the weight that the characters place on their own life projects.

The inner variables are understood as the emotions of the characters. These variables are harvested through the observation of two or three people in the cave. In here they explore the inner geography of the two characters in the play, they are, in a way, travelling through the inner landscape of the relationship. This approach to virtual scenography is called "virtual surrealism" (Hansen 2000). Through the exploration of the inner landscape four variables are set. The first is "love" understood as the ability of the characters to overcome isolation and to create a common place to meet and communicate. The second is "trust" understood as the ability of the characters to create durable common solutions. The third is "confusion", understood as tendency of the characters to loose focus, orientation and understanding of consequences, i.e. the ability to navigate. The last is "anxiety", understood as the characters tendency to avoid interaction.

The state machine compares these two sets of variables. It then decides which of two possible routes the story will take, which of the four different emotions will set the ambiances on the scene, especially in choosing light and sound, and which of the four possible endings is to be played out. Like this "The State Machine" replaces any direct interaction from the main audience. This design is chosen to avoid the act of ongoing rational choosing which we see as an "entfremdung" of the audience through the use of a kind of interactive "verfremdung" (see a.o. Brecht 1960). This is important, as we don't want to remove the audience from identifying with the characters and the story.¹

Designing oscillations

In the performance "the state machine" regulates, it would seem, the relation of feelings and attitudes. This process can perhaps more precisely be regarded as a kind of phenomenological oscillation (Husserl 1997, Spencer-Brown 1969). The oscillation is between sides of a difference, in this case most obviously between the variables "morality" – "ethics" and "sociality" – "individuation" and "love" – "hate", "trust – distrust" etc. These oscillations are however only parts of the overall design expressed as an oscillatory "performative space".

This performative space is initiated by an abstract virtuality designed in sound. The audience hear a heartbeat, a poem recited and a strange conversation between two people – a man and a woman - trying to reach each other in an abstract 3D space filled with old furniture. Between the scenes we follow how they seek, meet and finally, depart again. The sound track forms the perceived oscillation between the two main levels of the scenography: the virtual reality scenes projected in active 3D on the background, and the live performance scene being performed in the foreground.

The show moves forward through a complex interplay between the three levels. The scenography constantly points to how the audience is both inside and outside of the characters on the stage. They, as we, are split between feelings and attitudes. The oscillation is supported by various kinds of back

¹ This identification could be said to be the most important mechanism behind the creation of the performative space of the show. See also Hansen 2001, Hansen 2002 and Hansen 2003.

projections, so called re-entry (Spencer-Brown 1969), for example the abstract conversation that connects the scenes. The oscillations and the re-entry are finally, reflected up against a non-transcendable "other place", the invisible "Oracle" somewhere. Thus momentarily creating a heterotopia (Foucault 1986) in which people might reflect themselves and realize their own communicative resources. All this is reflected in the function of The State Machine. To design this set of rules is thus, the most central aspect of the design process.

Conclusion

The goal has been to focus on how people are able to produce transcendental "realities" through which they can communicate. The divine hand behind the performance can thus be seen as a kind of the sum of transcendental "egos" (Schutz 1945), brought together through the work of the audience directed by the state machine. Hence the "Oracle" becomes the symbol of liberating powers. It is a "meeting place" for people, in solidarity and, perhaps, love.

All the dimensions of our life, which we have studied, are meaningful only as long as we maintain the epoché in which they originate. Children start to play and stop to play; we turn to a work of art and turn away from it, we start a philosophical contemplation and end it. While we attend to a particular province of meaning we use the epoché peculiar to it. Here is our freedom of discretion: we may bestow upon each of these provinces the accent of reality and withdraw it again as we please.

The Paradox of the Transcendental Ego. Schutz (1945) 1996, p. 190-192.

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Links:

VR-Media Lab: <http://www.vr-medialab.dk>

Oracle website: <http://www.vrmedialab.dk/projects/orakel/>

Personal website: <http://www.ruc.dk/~keha>